

Volume Manager 2.1.1 Upgrade Package Installation Instructions

1.0 General Description

This package has been designed to upgrade systems with Volume Manager 2.0 or 2.1 to Volume Manager 2.1.1. Volume Manager 2.0 has a known memory leak problem. This package contains the Volume Manager 2.1.1 packages; the Solaris 2.3 patches 101330-07, 103351-02, 103479-02, and 101318-80; and the fiber card (FC/S) firmware upgrade software.

Three scripts, `volume_manager_preinstall`, `volume_manager_install`, and `volume_manager_postinstall` have been provided with the package that will perform all the steps necessary to upgrade the Volume Manager software, install the Solaris patches, update the FC/S firmware and the SPARCstorage Array firmware.

Before attempting to install this package it is recommended that the following file systems be dumped to tape: `/`, `/usr`, `/var`, `/opt`.

2.0 Script Descriptions

The purpose of each of the scripts is explained below.

volume_manager_preinstall: This script, which must be run first, removes all Volume Manager related Solaris 2.3 patches and the JUMBO Kernel patch if it is older than version 101318-80. It also removes the old Volume Manager packages. To insure that the system will come up after the Volume Manager is removed the `/etc/vfstab` file that existed before the Volume Manager software was originally installed is restored. This is necessary because the root drive was encapsulated. The system will be shutdown at the completion of this script. You should reboot the system in single user mode using the following command: `boot -s`.

volume_manager_install: This script, which will not execute unless `volume_manager_preinstall` was run, installs the Volume Manager version 2.1.1 packages. After the packages are installed it will install the following Solaris 2.3 patches: 101318-80, 101330-07, 103351-02, and 103479-02. [Note: There is a newer version of JUMBO kernel patch, 101318-81, but we have encountered problems using it with GCCS]. The system will be shutdown at the completion of this script. You should reboot the system in single user mode using the following command: `boot -s`.

volume_manager_postinstall: This script determines if the SPARCstorage arrays are visible to the system. If they are visible and the firmware on them is less than 3.6 the new firmware, 3.6, is pushed to the SPARCstorage arrays. In addition the firmware on the fiber cards is upgraded to 1.33. The

steps outlined in the SPARCstorage Array User's Guide, page E-38, for recovering the array volumes by reconfiguring the Volume Manager are executed. The original /etc/vfstab and /etc/system files are restored prior to the system being shutdown. The system will be shutdown at the completion of this script. If the SPARCstorage array firmware was upgraded, you will be notified by the script if it was, the SPARCstorage array(s) must be powered down and then back on before the reboot. You should reboot the system using the following command: `boot`.

3.0 Installation Procedures

1. Backup the /, /usr, /var, and /opt file systems to tape using `ufsdump` or `tar`.
2. [Optional]: Install the SPARCstorage array eeprom and battery in each SPARCstorage array provided with the upgrade kit, if available.
3. Shutdown the system and reboot in single user mode:

```
# cd / [Return]
# /usr/sbin/shutdown -y -g0 or init 0 or uadmin 2 0 [Return]
ok boot -s [Return]
```

5. Mount the /opt partition by executing the following:

```
# mount /opt [Return]
```

6. The Volume Manager Upgrade package takes approximately 75MB of disk space. It is recommended that it be tar'd into /opt, if there is space. Load the tape and execute the following:

```
# cd /opt [Return]
# tar xvf /dev/rmt/0 [Return] (Replace "0" with correct tape drive number)
```

6. Execute the first script by performing the following steps:

```
# cd /opt/ARRAY [Return]
# ./volume_manager_preinstall [Return]
```

a. Outdated versions of the JUMBO kernel patch (pre 101318-80) and all patches which modify the Volume Manager software will be backed out automatically. If the Volume Manager specific patches, 101330-07, 103351-02, or 103479-02 were originally installed with the `-d` option, meaning they can't be backed out, the script will terminate and instruct you to remove the patches manually.

- b. During the removal of the Volume Manager packages you will be prompted several times with yes/no questions. You should answer yes in all cases.
- c. At the completion of the script the system will be shutdown. To continue with the next script execute the following:

ok **boot -s** [Return]

- 7. Mount the /opt partition by executing the following:

mount /opt [Return]

- 8. Execute the second script by performing the following steps:

cd /opt/ARRAY [Return]
./volume_manager_install [Return]

- a. To install the Volume Manager packages select "**all**" from the following menu. You should answer "**y**" to all (yes/no) questions. For the SPARCstorage Array AnswerBook select "**2**" (heavy) and **/opt** for the location.

The following packages are available:

- 1 SUNWassa Using the SPARCstorage Array AnswerBook
(all) 52.3.2
- 2 SUNWdiag SPARCstorage Array Online Diagnostics Tool
(sparc) 1.0,REV=1.0.1
- 3 SUNWssadv SPARCstorage Array Solaris 5.3 Drivers
(sparc) 2.1,REV=1.0
- 4 SUNWssahd SPARCstorage Array Solaris 5.3 Header Files
(sparc) 2.1,REV=1.0
- 5 SUNWssamn SPARCstorage Man Pages
(sparc) 2.0,REV=1.0
- 6 SUNWssaop SPARCstorage Array Utility
(sparc) 2.1,REV=1.0
- 7 SUNWvmman SPARCstorage Volume Manager (manual pages)
(sparc) 2.1.1
- 8 SUNWvxva SPARCstorage Volume Manager Visual Administrator
(sparc) 2.1.1
- 9 SUNWvxvm SPARCstorage Volume Manager
(sparc) 2.1.1

Select package(s) you wish to process (or 'all' to process
all packages). (default: all) [?,??,q]:

NOTE: During the installation of SUNWvxva you may encounter the following error. Ignore the error it does not affect the install.

```
ERROR: attribute verification of </opt> failed unable to determine owner for uid <103>
## Executing postinstall script
Installation of <SUNWvxva> partially failed.
```

- b. When all the packages have been installed the following will appear. Select “q” to continue.

Select package(s) you wish to process (or 'all' to process
all packages). (default: all) [?,??,q]:

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c. After the Volume Manager packages are loaded the Solaris 2.3 patches will be loaded automatically. This will take approximately 60 minutes, if the JUMBO kernel patch, 101318-80, is being loaded. It will take significantly less time if 101318-80 had previously been installed.

d. At the completion of the script the system will be shutdown. To continue with the next script execute the following:

```
ok boot -s [Return]
```

9. Mount the /opt partition by executing the following:

```
# mount /opt [Return]
```

10. Execute the final script by performing the following steps:

```
# cd /opt/ARRAY [Return]  
# ./volume_manager_postinstall [Return]
```

a. During the loading of the Fiber Card (FC/S) firmware you will be prompted with the following message, answer “**yes**” to continue upgrade.

WARNING! WARNING! WARNING! WARNING! WARNING! WARNING! WARNING!
If This program fails or the system crashes during download, your FC/S card may become unusable.

Do you wish to continue? (y/n)

b. Ignore the async errors that are encountered on some systems, they have no affect on the successfull download of the firmware. If the Fiber Card (FC/S) firmware successfully loads the following should be output:

```

Downloading FCode
loading 0x10218 bytes from soc.img.1.33 at offset 0x0
filling with zeroes
selecting bank 0      selecting bank 1      selecting bank 2      selecting bank 3      erasing
FEprom at df71e000: erased after 52 attempts
programming
selecting bank 0      selecting bank 1      selecting bank 2      selecting bank 3      done

```

c. Prior to shutting the system down the script will inform you if the firmware on the SPARCstorage arrays were upgraded. If the firmware was upgraded you must shut the SPARCstorage arrays down and then back on before rebooting the system. You must wait until all the disk drives appear in the LED before rebooting the system. If the new eeprom and battery were installed the wrench and battery symbols should no longer appear.

Note: The way in which the disk LEDs cycle is significantly different after the SPARCstorage array firmware upgrade. The SPARCstorage array disks also come on line faster.

d. At the completion of the script the system will be shutdown. Power cycle the SPARCstorage arrays if necessary and execute the following:

```
ok boot [Return]
```

11. As the system comes up you should note if Oracle comes up. When the globe appears the system should be fully operational.

12. You should log in as root and bring up the Volume Manager GUI to ascertain the health of the SPARCstorage arrays.

```
# /opt/SUNWvxva/bin/ vxva [Return]
```

NOTE: The “.profile” file for root now has the incorrect path for vxva (/opt/vxva/bin). You should change the path to “/opt/SUNWvxva/bin” if you want to launch the Volume Manager GUI without using the full path.